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File No.: 6446-17US JA/AD(mb)

Montreal, Canada
November 20, 2003



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Osama MOSELHI et al.

Serial No. : 09/990,572

Filed : November 23, 2001

Title : METHOD AND APPARATUS FOR THE AUTOMATED
DETECTION AND CLASSIFICATION OF DEFECTS
IN SEWER PIPES

Group Art Unit: 3673

Examiner : (Unknown)

Agent of Record: James Anglehart, Reg. No. 38,796

Telephone N° : Tel: (514) 847-4244

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Pursuant to the duty of disclosure under 37 CFR 1.56, copies of the references listed on the attached PTO Form 1449 are submitted herewith.

It is hereby certified in accordance with 37 CFR 1.97(e) that no item of information contained in this Information Disclosure Statement was known to the Applicant or any individual designated in 37 CFR 1.56(c), or cited in a communication from a foreign Patent Office in a counterpart foreign application, more than three months prior to the filing of this statement.

In accordance with 37 CFR 1.97(h), the submission of the present information is not to be construed as an admission that such information is, or is considered to be material to patentability.

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The Examiner is kindly requested to consider these references during the examination of the above-identified application, making the references of record, and to return an initialed copy of the PTO-1449 Form to the below-signed agent.

Respectfully submitted,

Osama MOSELHI et al.

By:



James Anglehart

Agent of Record

Registration No. 38,796

OGILVY RENAULT

1981 McGill College Avenue, Suite 1600

Montreal, Quebec, Canada H3A 2Y3

Tel.: (514) 847-4244

Enclosures: 2 copies of PTO/SB/08A/B 08-03

Copy of the references cited therein

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Substitute for form 1449PTO				Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	09/990,572
				Filing Date	November 23, 2001
				First Named Inventor	Osame Mosehli et al.
				Art Unit	3673
				Examiner Name	(unknown)
Sheet	1	of	3	Attorney Docket Number	6446-17US JA/AD(mb)



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Sheet 1 of 3

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Application Number 09/990,572

Filing Date November 23, 2001

First Named Inventor Osame Moselhi et al.

Art Unit 3673

Examiner Name (unknown)

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U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

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Filing Date November 23, 2001

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Art Unit 3673

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Attorney Docket Number 6446-17US JA/AD(mb)

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		Abraham D. Chae et al.,(2000) "Utilizing Neural Networks for Condition Assessment of Sanitary Sewer Infrastructure". Proceeding of the 17 th Int'l Conference on Robotics and Automation in Construction, Taipei, Taiwan, pp. 423-427.	
		E.W. Duggan et al., (1995) Pratical Selection of Trenchless Technology "Methods for Sewerage and Drainage System Rehabilitation/Replacemen"t. Proceedings of the North American No-DIG'95, Chicago, Ill, SB2- pp.2-68.	
		Abraham D. Gokhale et al., (1998) Intelligent Systems Evaluation Technologies "An Analysis of Three Promising Options". Proceedings of the North American No DIG 98, New Mexico, pp. 254-256.	
		Abraham D. Gokhale et al., (2000) "Automated Assessment Technologies for Renewal of Underground Pipeline Infrastructure". Proceeding of the 17 th International Conference on Robotics and Automation in Construction, Taipei, Taiwan, pp. 433-438.	
		M. Kaseco et al., (1994) "Comparison of Traditional and Neural Classification for Pavement – Crack Detection". Journal of Transportation Engineering, ASCE, 120 (4), pp. 552-569.	
		Mosehli et al., (1993) "Project Selection Considering Risk". Construction Management and Economics, E & F.N. Spon, 11 (1), pp. 45-52.	
		Mosehli et al., (1999) "Automated Detection of Defects in Underground Sewer and Water Pipes". Journal of Automation in Construction, Elsevier Science, 8, pp. 581-588.	
		Mosehli et al., (1999) "An AI-Based System for Detection and Classification of Defects in Sewers". Proceedings in INFRA 99 International Conference, Center of Expertise and Research on Infrastructures in Urban Areas (CERIU), Montreal, CANADA 3B: pp. 42-54.	
		Mosehli et al., (2000) "Classification of Defects in Sewer Pipes Using Neural Networks". Journal of Infrastructure Systems, ASCE, 6(3) pp. 97-105.	
		Mosehli et al., (2000) "An Automated System for Rehabilitation of Sewe Pipes". Canadian Civil Engineer, CSCE, 17 (3), pp. 6-8.	

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				Filing Date	November 23, 2001
				First Named Inventor	Osame Mosehli et al.
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				Examiner Name	(unknown)
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		Moselhi et al., (2001) "Multiple Classifiers for Automated Detection of Defects in Sewer Pipes". Proceeding of 2001 International Conference on Rehabilitation of Infrastructures, Waterloo, Canada, pp. 273-278.		
		Moselhi et al., (1998) " Rehab Select: A decision Support System for Selecting Trenchless Pipeline Rehabilitation Techniques". Proceedings of the North American No-DIG'98, New Mexico, pp. 14-23.		
		Frederick, Md. (1996) " NeuroShell-2 reference manual". Ward Systems Group Inc.		
		Ritchie S., (1989) "Digital Image Concepts and Application in Pavement Management". Journal of Transportation Engineering, ASCE, 116 (3), pp. 287-298.		
		Richie et al., (1991), "Development of an Intelligent System for Automated Pavement Evaluation". Transportation Research Record, National Research Council, 1311, pp.112-119.		
		Frederick, Md. (1998) "Scion Image for Windows reference manual". Scion Corporation, Maryland, USA.		
		SINHA, S. (2001) "Development of an Automated Pipeline Inspection System", Proceeding of the International Symposium on Underground Infrastructure Research, Waterloo, Canada, pp. 279-286.		
		Shehab-Eldeen, T. et al., 2000, "A database System for Rehabilitation Techniques of Sewer Pipes". Proceedings of the 17th International Conference on Automation and Robotics in Construction., Taipei, Taiwan, pp. 1085-1090.		
		Shehab-Eldeen (2001) "A decision Support System for Rehabilitation of Sewer Pipes". Canadian Journal of Civil Engineering, CSCE 28(3), pp. 394-401.		
		Wirahadikusumah R., et al., (1998) "Assessment Technology for Sewer Rehabilitation". Journal of Automation in Construction, Elsevier Science, 7 (4), pp. 259-270.		

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